

# MATERIAL SAFETY DATA SHEET

**PRODUCT: BROMINE TABLETS**

**SOLD AS: IQ Spa Brom**

**Date of Issue: 23<sup>rd</sup> June 2005**

## STATEMENT OF HAZARDOUS NATURE

Classified as hazardous according to criteria of WorkSafe Australia

## COMPANY DETAILS

**Company :** International Quadratics Pty Ltd  
**Address:** 1/16 Nelson Avenue Padstow NSW 2211  
**Telephone:** (02) 9790 4200  
**Facsimile:** (02) 9790 5200

## PRODUCT IDENTIFICATION

**Product Name** IQ Spa Brom  
**Other Names** Brominating Tablets  
Dihalo Tablets  
BCDMH Tablets  
**UN Number** 1479 \*  
**DG Class** 5.1 \*  
**Hazchem Code** 1Y \*  
**Poisons Schedule** S6

\* For the purpose of transportation by road and rail, quantities of **less than 1 kg** have been identified as **non-dangerous goods** by the Australian WorkCover Authority. Bulk quantities are classified as per the above schedule and are dealt with in the subsection on Storage and Handling.

## PHYSICAL DESCRIPTION AND PROPERTIES

**Appearance:** White tablets, bromine odour.  
**Boiling Point:** Decomposes > 145°C  
**Melting Point :** Decomposes > 145°C  
**Vapour Pressure:** N Av  
**Specific Gravity:** 0.96  
**PH:** 3.4 – 3.6 (0.1% solution at 20°C)  
**Solubility:** 1.5 g/L in water at 20°C

**Reactivity:** Stable under normal conditions.  
Avoid contact with water during storage or handling.  
Reacts with easily oxidisable material, including many pool  
Chemicals in their concentrated form.  
Reacts exothermically with strong acids and alkalis.  
Reacts with ammonia, urea and related nitrogen  
compounds  
Reacts with inorganic reducing agents.

## COMPOSITION

<b>Chemical Name</b>	<b>CAS No.</b>	<b>Proportion</b>
1-Bromo-3-chloro-5, 5- dimethylhydantion (BCDMH)	16079-88-2	96%
Inert Materials (not including water)	Not allocated	Balance

## HEALTH HAZARD INFORMATION

### Effects from Acute Exposure

**Ingestion:** Extremely corrosive. Ingestion may result in death.

**Eyes:** Extremely corrosive to eyes. May cause sever corneal  
damage and possibly blindness.

**Skin:** Corrosive to skin. May cause severe burns.

**Inhalation:** Corrosive. Inhalation of vapours and dust may cause  
Severe irritation to nose, mouth and throat.

### Effects from Chronic Exposure

The effects of long term, low level exposures to this product have not been determined.  
However, safe handling of this product on a long-term basis should emphasised  
minimising repeated acute exposures.

## FIRST AID

**Ingestion:** If conscious, drink large quantities of water immediately.  
Do NOT induce vomiting. Take immediately to a hospital.  
Do NOT attempt to induce vomiting or give anything by  
mouth to an unconscious person.

**Eyes:** Immediately irrigate with copious quantities of water for at  
least 15 minutes. Eyelids to be held open. Seek medical  
Attention.

**Skin:** Immediately wash contaminated area with plenty of water. Remove contaminated clothing. Wash contaminated Clothing before re-use. If irritation occurs, contact a Doctor.

**Inhalation:** Move victim into fresh air and obtain medical assistance. If breathing has stopped, clear airway and give artificial Respiration, preferable mouth-to-mouth. If breathing is difficult, give oxygen.

**Advice to doctor:** Probable mucosal damage may contraindicate the use of Gastric lavage.

### **FIRST AID FACILITIES**

Eye wash in area of use

### **PRECAUTIONS FOR USE**

#### **EXPOSURE STANDARDS**

Although no specific exposure limits have been established for this material, the American Conference of Governmental Industrial Hygienists Inc. (ACGIH) has established a TLV/TWA: Total 3 mg/m<sup>3</sup> for nuisance dusts. TLV (Threshold Limit Value) is the time weighted average concentration of the work atmosphere for a normal 8-hour day and a 40-hour week, to which nearly all workers can be repeatedly exposed day after day without adverse effect. TWA is the Time-Weighted Average airborne concentration over an 8-hour working day, for a 5-day working week over an entire working life. TLV and TWA values are issued as guidelines for good practice. All atmospheric contamination should be kept to, as low a level as is practically possible. These limits are stated only to indicate the **least** stringent airborne dust exposure levels applicable to nuisance dust. Dust from this product may cause irritation at exposure concentrations below these limits.

The oral LD<sub>50</sub> (rat) for BCDMH is 578 ppm. The primary skin irritation index is 6.1, indicating that the product is considered "corrosive to skin".

R26 - Very toxic by inhalation.

R35 - Causes severe burns

#### **ENGINEERING CONTROLS**

Use adequate ventilation to maintain atmospheric dust and vapour concentration at lowest practicable level. Avoid generating and inhaling dusts.

## **PERSONAL PROTECTION**

Avoid skin and eye contact. Wear overalls, chemical goggles, full-face shield, impervious gloves, rubber boots and rubber apron when working with large volumes. Use with adequate ventilation. If inhalation risk exists, wear respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and protective equipment before re-using.

## **FLAMMABILITY**

Not combustible under normal circumstances. Dust explosion severity tests undertaken by the US Bureau of Mines determined that BCDMH is not ignitable.

## **STORAGE AND HANDLING**

Reseal container after use and keep container tightly closed. Protect from extremes of temperature. Store in a cool, dry place away from acids, alkalis and other oxidising media such as calcium hypochlorite. Do not allow water to get into container. Keep containers off wet floors.

## **SPILLS AND DISPOSAL**

Wear protective equipment to prevent skin and eye contamination and inhalation of dust. Contain spilled material and clean up immediately to prevent contamination of product. Keep spilled material dry if possible. Sweep, scoop, or vacuum all spilled material and contaminated soil, etc/. and place in clean dry containers for disposal. Keep unneutralised product out of sewers, watersheds and water systems.

For disposal, refer to the **State Land Waste Management Authority**. Incineration is recommended at approved waste incinerator if material is dry. Do not dispose of filled or partially filled containers in waste compactors. Common contaminants, such as oil, sawdust and floor sweeping compounds, can cause spontaneous decomposition if the material at ambient temperatures, resulting in rupture of containers. Do not re-use empty containers; triple-rinse and dispose of properly. Never transport wet material.

## **FIRE AND/OR EXPLOSION HAZARD**

Not combustible under normal circumstances. In fires fuelled by other materials, this product may smoulder for prolonged periods, liberating dense black smoke.

### **Extinguishing Medium:**

Use large amounts of water only; smothering is ineffective due to products' ability to supply oxygen under combustion. Due to the potential for violent reaction, do not use dry chemical or ammonium phosphate-based fire extinguishers.

**Fire Fighting Instruction:**

Fire Fighters or others exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Thoroughly decontaminate clothing after use.

**Hazardous Combustion:**

Decomposes above 145°C liberating a range of toxic and corrosive gases, including bromine, chlorine, hydrogen bromine and hydrogen chloride; containers may rupture.

**CONTACT INFORMATION**

**CONTACT:            GENERAL MANAGER:            (02) 9790 4200**

**DISCLAIMER**

All information given in this data sheet and by the company's technical staff is compiled from the information currently available to the company. The company accepts no responsibility whatsoever for its accuracy, or for any results which may be obtained by customers. Any customer who relies upon any advice or information given in this data sheet by the company or by its technical staff does so entirely at its own risk, and the company will not be liable for any loss or damage thereby suffered notwithstanding any want of care on the part of the company or its staff in compiling or giving the advice or information.